

NEW SPECIES OF HEMIGENIA AND MICROCORYS (LABIATAE)

by

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ABSTRACT

Conn, B. J. New species of *Hemigenia* and *Microcorys* (Labiatae). *Muelleria* 6(4): 259-264 (1986). — *Hemigenia conferta*, *Microcorys cephalantha*, *M. wilsoniana* (all from Western Australia) and *M. elliptica* (from the Northern Territory) are described for the first time.

INTRODUCTION

The completion of taxonomic revisions of *Hemigenia* and *Microcorys* must be delayed until field studies provide the necessary data to evaluate the status of several taxa in a number of apparent species complexes. Although it is desirable for new taxa to be described within taxonomic revisions, it is deemed important that the new species described herein be published immediately, since they all appear to be rare and are possibly endangered or vulnerable.

Terminology and presentation follows that used in my revision of *Prostanthera* section *Klanderia* (Conn 1984, pp. 211-220).

HEMIGENIA

Hemigenia conferta Conn, sp. nov.

Frutices 0.3-1.4 m. alti. *Rami* et *ramuli* partim sparse usque moderate tomentosi. *Folia* opposita, sessilia, glabra; *laminae* dimorphae, *folia florum* late subobtrullata usque subobtrullata, 7-10 mm. longa, 5.5-7 mm. lata, basi angustata, margine integro, apice late obtuso vel saepe abrupte obtuso, *folia non florum* anguste ovata usque anguste obovata, 9.5-15 mm. longa, 3-5 mm. lata, basi plus minusve cuneata, margine integro, apice obtuso. *Flores* in axibus abbreviatis congesti. *Pedicellus florum* 2.3-2.6 mm. longus, partim axe adhaerens, glaber, *prophyllis* anguste ellipticis, 5.7-7.3 mm. longis, 2-2.1 mm. latis, glabris, alibi marginem pilis sparsis. *Calyx* bilobatus, glaber, alibi lobi margine pilis sparsis; *lobus abaxialis* circa 4 mm. longus, circa 3 mm. latus, apice bilobato; *lobus adaxialis* 3-4 mm. longus, circa 3.5 mm. latus, apice trilobato. *Corolla* 13-14 mm. longa, malvina, alibi intra tubi albi vel cremei, extra glabra, intra in partibus dense tomentosa; *tubus* 5.6-5.9 mm. longus; *lobus abaxiali-medianus* spatulatus, circa 6-6.5 mm. longus, 6.5-7 mm. latus; *lobis lateralibus* plus minusve circularibus circa 4.5-4.8 mm. longis, circa 4.5 mm. latis; *pari loborum adaxiali-mediano* transverse late elliptico, 5.2-5.5 mm. longo, 6.8-7 mm. lato. *Androecium* circa 3.3 mm. e basi corollae affixum; filamenta abaxialia 3.4-3.6 mm. longa, anthera 1-1.2 mm. longa, anthera imperfecta circa 0.6 mm. longa, connectivo circa 1.4 mm. longo; filamenta adaxialia 2.3-2.4 mm. longa, anthera 1-1.2 mm. longa, connectivo circa 1 mm. longo. *Pistillum* 9.8-10.2 mm. longum; ovarium 0.9-1 mm. longum; stylus 8.4-8.7 mm. longus. *Mericarpi* immatura.

TYPE: Conn 2243, 19.ix.1985, Wongan Hills, c. 1.5 km N. of Wongan Hills-Piawaning road and c. 13 km NW. (by road) of Wongan Hills township (Holo.: MEL 1538990; iso.: CANB, MO, PERTH).

Erect to spreading shrub, 0.3-1.4 m high. *Branches* sparsely to moderately hairy along a narrow longitudinal region between leaf bases and the next more basal node. *Leaves* opposite, sessile, glabrous; *lamina* dimorphic; *floral leaves* broadly subobtrullate to subobtrullate, 7-10 x 5.5-7 mm, base tapering, margin entire, apex broadly obtuse, often abruptly obtuse; *non-floral* leaves narrowly ovate to narrowly obovate, 9.5-15 x 3-5 mm, base \pm cuneate, margin entire, apex obtuse. *Inflorescence* a frondose racemiform corymbose with Rz internodes contracted; 8-16-flowered [per corymbose]. *Pedicel* 2.3-2.6 mm long, at least half adhering to Rz axis, glabrous; *prophylls* narrowly elliptic, 5.7-7.3 mm long, 2-2.1 mm wide,

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glabrous except for a few hairs on margin, base cuneate, margin entire, apex acute. *Calyx* 2-lobed, glabrous except for a few hairs on margin of lobes; *tube* 2.5-3.3 mm long; *abaxial lobe* c. 4 mm long, c. 3 mm wide, apex bilobed with sinus c. 2 mm long; *adaxial lobe* 3-4 mm long, c. 3.5 mm wide, apex trilobed with sinuses c. 2 mm long, adaxial lateral lobes often narrower and more acute than adaxial median lobe. *Corolla* 13-14 mm long, mauve on lobes and outer surface of tube, white to cream-coloured with maroon dots on inner surface of tube; outer surface glabrous; inner surface densely hairy at base of stamens, with occasional shorter hairs distally; *tube* funnel-shaped, 5.6-5.9 mm long; *abaxial median lobe* spatulate, c. 6-6.5 mm long, 6.5-7 mm wide, margin often slightly irregular, apex emarginate to bilobed (sinus c. 0.3 or 1.6-1.7 mm long), if lobed then each lobe notched producing a small lateral secondary lobe or variously notched; *lateral lobes* \pm circular, c. 4.5-4.8 mm long, c. 4.5 mm wide, apex slightly emarginate; *adaxial median lobe-pair* transversely broad-elliptic, 5.2-5.5 mm long, 6.8-7 mm wide, apex bilobed (sinus 2-2.3 mm long), each lobe emarginate and so producing a small lateral secondary lobe. *Androecium* inserted c. 3.3 mm above base of corolla; *abaxial staminal filaments* 3.4-3.6 mm long; *anther* 1-1.2 mm long, *imperfect anther* c. 0.6 mm long, connective c. 1.4 mm long; *adaxial staminal filaments* 2.3-2.4 mm long, *anther* 0.8-0.9 mm long, connective c. 1 mm long, with sterile lobe c. 0.6-0.9 mm long and terminating in several narrowly triangular trichomes. *Pistil* 9.8-10.2 mm long; ovary 0.9-1 mm long; style 8.4-8.7 mm long. *Mericarps* immature.

DISTRIBUTION:

Endemic to the Wongan Hills, Western Australia.

ECOLOGY:

Occurring in *Petrophile*-dominated shrubland in shallow soils on lateritic rise.

NOTES:

This species is vegetatively very similar to *Microcorys obovata*, but the leaves are opposite in *H. conferta* and in whorls of three in *M. obovata*. The dimorphic leaves of this new species readily distinguish it from *M. obovata* and other *Hemigenia* species. The floral leaves remain on the plant for at least two flowering seasons. The short internodes of the *Rz* (conflorescence) axis and the adherence of the pedicel to the *Rz* axis are useful diagnostic features of this species.

The affinities of *H. conferta* are unclear, but it may be related to *H. obovata*. However, the latter has linear prophylls, a distinctly 'free' pedicel, hairy branches and *Rz* internodes of similar length to the vegetative internodes.

OTHER SPECIMENS EXAMINED:

Western Australia: South-West (Avon) — *Conn 2244* (MEL 1538991, PERTH), *2251* (MEL 1538992, PERTH) & *2257* (MEL 1538993, MO, PERTH, RSA) [date and locality as for type collection].

MICROCORYS

Microcorys cephalantha Conn, sp. nov.

Frutices 0.2 m. alti. *Rami* et ramuli partim dense tomentosi. *Folia* verticillata terna, glabra vel pilis sparsis; *petiolus* absens; *lamina* anguste obovata, 10-12.5 mm. longa, 2.5-4 mm. lata, basi anguste cuneata, margine integro, apice obtuso. *Inflorescentiae* ad instar capitulorum. *Pedicellus florum* 0.3-0.5 mm. longus, dense tomentosus, *prophyllis* anguste deltoideis usque anguste suboblongis, 0.4-0.5 mm. longis, circa 0.1 mm. latis, sparse usque dense tomentosis. *Calyx* partim sparse usque moderate tomentosus, extra sparse usque moderate glandifer; *tubus* 2.8-3.1 mm. longus; *lobi* deltoidei usque late deltoidei, 2.8-3.1 mm. longi, 0.9-1.3 mm. lati, apice acuminato usque subcaudato. *Corolla* circa 6-8 mm. longa, alba et partim lutea, extra lobis moderate usque dense tomentosa, intra in partibus distalibus moderate tomentosa; *tubus* 4.3-5 mm. longus; *lobus abaxiali-medianus* plus minusve spatulatus, circa 4.5 mm. longus, circa 3 mm. latus; *lobis lateralibus* obovatis usque spatulatis, 2.3-3.9 mm. longis, 1.4-2.8 mm. latis; *pari loborum adaxiali-mediano* cuculliformi, 2.6-3.3 mm. longo. *Androecium* 3.5-3.8 mm. e basi corollae affixum; filamenta staminum 2.4-2.5 mm. longa; antherae

0.7-1 mm. longae, connectivo prope basim filamenti adnato, 0.8-0.9 mm. longo; filamenta staminodiorum circa 0.5 mm. longa; lobi staminodiorum circa 1 mm. longi. *Pistillum* 6.2-6.8 mm. longum; ovarium circa 0.3 mm. longum; stylus 5.7-6.3 mm. longus. *Mericalpia* 1.8-2 mm. longa.

TYPE: *Hnatiuk* 780068, 13.i.1978, 10 km WNW. of Jitarning, Western Australia (Holo.: PERTH; iso.: MEL 1538995). [Actually NW. of Jitarning, on 'Eighty Six Gate road', 4 km W. of junction with the 'Jitarning West road'.]

Shrub, 0.2 m high. *Branches* decumbent with erect new shoots, densely hairy along a narrow longitudinal region between axil of leaf and next more distal node, more basal internodes sparsely hairy. *Leaves* in whorls of 3, sessile, glabrous or with a few scattered \pm patent, multicellular hairs near and/or on margin; *lamina* narrowly obovate, 10-12.5 x 2.5-4 mm, base narrowly cuneate, margin entire, apex obtuse. *Inflorescence* a head-like frondo-bracteose racemiform conflorescence, internodes of conflorescence (R_z axis) reduced; c. 10-flowered [per conflorescence]. *Pedicel* 0.3-0.5 mm long, densely hairy; *prophylls* narrowly triangular to narrowly suboblong, 0.4-0.5 mm long, c. 0.1 mm wide, sparsely to densely hairy, margin entire, apex obtuse. *Calyx* sparsely to moderately hairy on margin of lobes and distal inner surface of lobes; outer surface sparsely to moderately glandular, glands pedicellate, up to c. 0.1 mm long; *tube* 2.8-3.1 mm long; *lobes* triangular to broadly triangular, 1-1.6 mm long, 0.9-1.3 mm wide, apex acuminate to subcaudate. *Corolla* c. 6-8 mm long, 'white with maroon spots, hood [adaxial median lobe-pair] yellow with red-brown internal spots' (*Hnatiuk* 780068); outer surface with tube glabrous and lobes moderately to densely hairy; inner surface of tube glabrous, occasionally with a few hairs just below base of androecium, adaxial median lobe-pair and margin of abaxial and lateral lobes moderately hairy; *tube* narrowly tubular and abruptly expanded distally, 4.3-5 mm long; *abaxial median lobe* \pm spatulate, c. 4.5 mm long, c. 3 mm wide, apex irregular and emarginate; *lateral lobes* obovate to spatulate, 2.3-3.9 mm long, 1.4-2.8 mm wide, apex irregular; *adaxial median lobe-pair* hood-shaped, margin obovate in outline, 2.6-3.3 mm long, c. 2 mm wide, margin \pm recurved, 'apex' rounded. *Androecium* inserted 3.5-3.8 mm above base of corolla (in expanded distal part of tube); *staminal filaments* 2.4-2.5 mm long; *anthers* 0.7-1 mm long, connective displaced basally so that it is adnate c. 0.4 mm from base of filament, 0.8-0.9 mm long and terminated by several hairs, sterile end of connective not enlarged; *staminodal filaments* c. 0.5 mm long; *staminodal lobes* c. 1 mm long. *Pistil* 6.2-6.8 mm long; ovary c. 0.3 mm long; style 5.7-6.3 mm long. *Mericalps* 1.8-2 mm long.

DISTRIBUTION:

Only known from the South-West botanical province (Avon and possibly Roe districts) of Western Australia.

ECOLOGY:

Occurring in roadside closed heath community on sandy loam with lateritic gravel (*Hnatiuk* 780068).

NOTES:

This species has close affinities with *M. capitata*, since both have head-like conflorescences, acuminate to subcaudate calyx lobes and the staminal connective greatly removed from the anther. *M. cephalantha* is readily distinguished from *M. capitata* by the narrowly obovate sessile leaves (ovate and distinctly shortly petiolate in *M. capitata*), the narrowly cuneate leaf base (rounded in *M. capitata*), and by the floral leaves which are distally reduced to prophylls (broadened, hence broadly ovate and more or less covering the flowers in *M. capitata*).

OTHER SPECIMEN EXAMINED:

Western Australia: South-West (Avon) — Foreman 1141, 21.xi.1985, 18 km S. of Kulin (MEL 678390).

(? *Avon or Roe*) — *Humphreys s.n.*, 11.xii.1965, 119.5 miles [? from Perth] along Lake Grace road (PERTH).

***Microcorys elliptica* Conn, sp. nov.**

Frutices parvi. *Rami* et ramuli moderate tomentosi. *Folia* verticillata terna, moderate tomentosa; *petiolus* circa 2-2.5 mm. longus; *lamina* anguste elliptica, 15-21 mm. longa, 2.5-4 mm. lata, basi decurrens, margine integro et leviter recurvo, apice subacuto. *Pedicellus florum* 2-3 mm. longus, dense tomentosus, *prophyllis* anguste obovatis usque linearibus, 1.3-2.2 mm. longis, 0.2-0.3 mm. latis, dense tomentosis. *Calyx* extra dense tomentosus; *tubus* 2.7-3.3 mm. longus, interne ad basim glaber, alibi tomentosus; *lobi* deltoidei, 2.5-2.8 mm. longi, 1-2.2 mm. lati, apice obtuso. *Corolla* 7-11 mm. longa, alba, extra in partibus distalibus dense tomentosa, intra dense tomentosa ad basim androecii; *tubus* circa 3.5 mm. longus; *lobus abaxiali-medianus* late spatulatus usque depresso-spatulatus, 2.5-3.8 mm. longus, 3.5-3.8 mm. latus; *lobis lateralibus* plus minusve oblongis, (2-)2.7-2.9 mm. longis, circa 1.5-1.7 mm. latis; *pari loborum adaxiali-mediano* cuculliformi, 2.3-2.5 mm. longo. *Androecium* 1.7-1.8 mm. e basi corollae affixum; filamenta staminum 3.7-3.8 mm. longa; antherae 1.7-1.8 mm. longae, connectivo circa 1.5 mm. longo; filamenta staminodiorum 3.3-3.5 mm. longa; lobi staminodiorum circa 1.5 mm. longi. *Pistillum* circa 4.5-5 mm. longum; ovarium circa 0.9-1 mm. longum; stylus 3-4 mm. longus. *Mericaipia* immatura.

TYPE: *Craven* 6647, 30.iii.1981, c. 18 km SE. of Jabiru, Kakadu National Park, Northern Territory (Holo.: MEL 653914; iso.: CANB).

Small weak shrub (height not known). *Branches* moderately hairy. *Leaves* in whorls of 3, moderately hairy; *petiole* c. 2-2.5 mm long; *lamina* narrowly elliptic, 15-21 x 2.5-4 mm, base decurrent, margin entire, slightly recurved, apex subacute. *Inflorescence* a frondose racemiform confluence; to c. 54-flowered [per confluence]. *Pedicel* 2-3 mm long, densely hairy; *prophylls* narrowly obovate to linear, 1.3-2.2 mm long, 0.2-0.3 mm wide, densely hairy, base very narrowly cuneate, margin entire, apex obtuse. *Calyx* outer surface densely hairy, especially on tube; *tube* 2.7-3.3 mm long, with inner surface glabrous basally, densely hairy on distal half; *lobes* triangular, 2.5-2.8 mm long, 1-2.2 mm wide, apex obtuse. *Corolla* 7-11 mm long, white; outer surface glabrous basally, densely hairy distally; inner surface glabrous on basal 1.7-1.8 mm of tube, densely hairy in a narrow band where the androecium unites with the corolla, distally with occasional hairs; *tube* c. 3.5 mm long; *abaxial median lobe* broadly spatulate to depressed-spatulate, 2.5-3.8 mm long, 3.5-3.8 mm wide, apex irregular and rounded, emarginate; *lateral lobes* ± oblong, (2-)2.7-2.9 mm long, c. 1.5-1.7 mm wide at base, apex irregular and broadly obtuse; *adaxial median lobe-pair* hood-shaped, 2.3-2.5 mm long, margin recurved, apex bilobed (sinus c. 0.8 mm long), apex of each lobe-pair obtuse. *Androecium* inserted 1.7-1.8 mm above base of corolla; *staminal filaments* 3.7-3.8 mm long; *anthers* 1.7-1.8 mm long, connective c. 1.5 mm long and terminated by many narrowly triangular trichomes; *staminodal filaments* 3.3-3.5 mm long; *staminodal lobes* c. 1.5 mm long. *Pistil* c. 4.5-5 mm long; ovary c. 0.9-1 mm long; style 3-4 mm long. *Mericaips* immature.

DISTRIBUTION:

Only known by the type specimen from Kakadu National Park, Northern Territory.

ECOLOGY:

Occurs in 'crevices on exposed sandstone cliff [which is an] outlier of main plateau' (*Craven* 6647).

NOTES:

This new species is of biogeographical interest because of its large disjunction with the centre of diversity of the genus (*viz.* south-western Western Australia).

The affinities of this species are not known. *M. longiflora* is the only species which is superficially similar to *M. elliptica*. However, the two species are readily

distinguished. The leaves of *M. longiflora* are narrowly ovate or sometimes appear narrowly oblong because the margin is recurved (never narrowly elliptic), whereas *M. elliptica* has narrowly elliptic leaves. Furthermore, the corolla of *M. longiflora* is about 15 mm long, whereas the corolla is 7-11 mm long in *M. elliptica*.

***Microcorys wilsoniana* Conn, sp. nov.**

Frutices 0.5-0.6 m. alti. *Rami* et *ramuli* dense tomentosi. *Folia* verticillata terna vel opposita, moderate vel sparse tomentosa; *petiolus* absens aut si praesens tum usque ad circa 0.5 mm. longus; *lamina* late ovata usque ovata, 8-16 mm. longa, 3.5-12 mm. lata, basi obtusa usque subtruncata, margine integro et recurvo, apice obtuso. *Pedicellus florum* 1.5-1.9 mm. longus, dense tomentosus, *prophyllis* anguste obovatis, 2.5-2.7 mm. longis, 0.4-0.6 mm. latis, dense tomentosis. *Calyx* dense tomentosus; *tubus* 2.6-3.1 mm. longus; *lobi* late deltoidei, 2.5-2.6 mm. longi, 1.3-2 mm. lati, apice obtuso. *Corolla* 11-14 mm. longa, malvina vel purpurea, extra in partibus distalibus moderate usque dense tomentosa, intra in partibus distalibus moderate tomentosa; *tubus* 8-10 mm. longus; *lobus abaxiali-medianus* depresso-obovatus, 3.4-4.5 mm. longus, 5.5-6.5 mm. latus; *lobis lateralibus* late obovatis, 2.6-3.6 mm. longis, 3.3-3.9 mm. latis; *pari loborum adaxiali-mediano* cuculliformi usque depresso-ovato, circa 3.3 mm. longo. *Androecium* 3.8-4.6 mm. e basi corollae affixum; filamenta staminum 1.6-1.8 mm. longa; antherae 1-1.1 mm. longae, connectivo 1.5-2.3 mm. longo; filamenta staminodiorum 1.8-2 mm. longa; lobi staminodiorum 0.5-0.8 mm. longi. *Pistillum* 8.5-9 mm. longum; ovarium 0.7-0.8 mm. longum; stylus 7.5-9 mm. longus. *Mericarpi* 1-1.2 mm. longa.

TYPE: *Wilson 6934*, 8.viii.1968, N. side of Mt Short, c. 14 km NNW. of Ravens-thorpe, Western Australia (Holo.: MEL 1538613; iso.: MEL 1538612, PERTH, other duplicate to be distributed).

Shrub, 0.5-0.6 m high. *Branches* densely hairy. *Leaves* in whorls of 3 or opposite, sessile or very shortly petiolate, densely hairy basally, moderately or sparsely hairy distally; *petiole* up to c. 0.5 mm long; *lamina* broadly ovate to ovate, 8-16 x 3.5-12 mm, base obtuse to subtruncate, margin recurved, apex obtuse. *Inflorescence* a frondose racemiform confluence; 6-12 flowered [per confluence]. *Pedice* 1.5-1.9 mm long, densely hairy; *prophylls* narrowly obovate, 2.5-2.7 mm long, 0.4-0.6 mm wide, densely hairy, base narrowly cuneate, margin entire and slightly incurved, apex obtuse. *Calyx* densely hairy; *tube* 2.6-3.1 mm long; *lobes* broadly triangular, 2.5-2.6 mm long, 1.3-2 mm wide, apex obtuse. *Corolla* 11-14 mm long, mauve or purple; outer surface glabrous basally, moderately to densely hairy distally; inner surface glabrous on basal 2.3-2.5 mm of tube, moderately hairy in distal parts of tube and base of lobes, especially on median lobes; *tube* 8-10 mm long; *abaxial median lobe* depressed obovate, 3.4-4.5 mm long, 5.5-6.5 mm wide, apex irregular, bilobed (sinus c. 1.3 mm long); *lateral lobes* broadly obovate, 2.6-3.6 mm long, 3.3-3.9 mm wide, apex irregular, emarginate; *adaxial median lobe-pair* depressed ovate, c. 3.3 mm long, 4.6-4.8 mm wide, apex irregular, emarginate to bilobed (sinus 0.4-0.7 mm long), apex of each lobe-pair obtuse. *Androecium* inserted 3.8-4.6 mm from base of corolla; *staminal filaments* 1.6-1.8 mm long; *anthers* 1-1.1 mm long, connective 1.5-2.3 mm long and terminated by many narrowly triangular trichomes on an expanded and flattened sterile end; *staminodal filaments* 1.8-2 mm long; *staminodal lobes* 0.5-0.8 mm long. *Pistil* 8.5-9 mm long; ovary 0.7-0.8 mm long; style 7.5-9 mm long. *Mericarps* 1-1.2 mm long.

DISTRIBUTION:

Only known from Mt Short, Western Australia.

ECOLOGY:

Occurs on disturbed margin of extensive quarry for road metal in dense Mallee on red-brown lateritic and sandstone-derived soil (*Barker 2543*).

NOTES:

This species appears to have close affinities with *M. purpurea*. *M. wilsoniana*

has a calyx tube to lobe ratio of 0.8-0.9 (2.5-3.3 in *M. purpurea*), the indumentum generally patent even though varying from subretrorse to subantrorse but never appressed (subappressed to appressed antrorse hairs in *M. purpurea*) and the petioles absent or up to c. 0.5 mm long (consistently shortly petiolate and c. 0.8 mm long in *M. purpurea*).

ETYMOLOGY:

The specific epithet honours Paul G. Wilson of the Western Australian Herbarium for his significant contribution to the taxonomy of the Australian flora.

OTHER SPECIMEN EXAMINED:

Western Australia: South-West (Eyre) — *Barker* 2543, 21.ix.1977, Mt Short (AD, MEL 1538996); *Foreman* 1203, 24.xi.1985, *ibidem* (MEL 678389); *George* 4440, 25.v.1963, *ibidem* (MEL 1538994, PERTH); *Young* Y269, 10.x.1967, *ibidem* (PERTH).

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REFERENCE

- Conn, B. J. (1984). A taxonomic revision of *Prostanthera* Labill. section *Klanderia* (F.v. Muell.) Benth. (Labiatae). *J. Adelaide Bot. Gard.* 6: 207-348.

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